allay the anxiety of current smokers, shifting their attention away from the decision to stop smoking by presenting the option of switching to an ostensibly less hazardous brand (Davis 1987). It has also been suggested that tobacco advertising interferes with efforts to inform the public of the health hazards of smoking because media that accept tobacco advertising provide less coverage about the health hazards of tobacco use. Proponents of this view contend that restricting tobacco advertising would reduce both the number of prosmoking messages and their alleged restraining influence on the flow of antitobacco information from the media, thereby making antismoking efforts more visible and potentially more effective (Warner 1985).

By contrast, both tobacco products manufacturers and representatives of the major associations of advertisers have consistently denied that advertising and promotion encourage smoking and the use of other tobacco products. They claim that the purpose and effect of marketing are merely to provide information and to influence brand selection among current users of tobacco products (Waterson 1982; O'Toole 1986; Weil 1986). The statement might also be made that cigarette advertising has permitted tobacco companies to successfully market new brands with reduced tar and nicotine yields and will allow for the future promotion of new products with reduced tar and nicotine. However, because of considerable controversy about the health effects of low-tar and low-nicotine cigarettes (US DHHS 1981a, 1988), the public health benefit of switching to these products remains in doubt (See Chapters 2 and 5).

Mechanisms by Which Advertising and Promotion May Affect Consumption

From a marketing perspective, advertising and promotion have different roles (Popper 1986a; Davis and Jason 1988). Conceptually, both tobacco advertising and promotion could increase tobacco consumption through several direct and indirect mechanisms (Warner 1986b; Warner et al. 1986a). Direct mechanisms all relate to the immediate impact of marketing techniques on the consumer or potential consumer. Indirect mechanisms are those that influence some factor other than the consumer (e.g., the behavior of other institutions such as the news media), which in turn affects the use of tobacco products.

Four direct mechanisms by which tobacco advertising and promotion may increase tobacco consumption have been suggested.

1. Advertising and promotion could encourage children or young adults to experiment with tobacco products and initiate regular use. This is the central focus of the public health concern about advertising and promotion. Initiation could be encouraged when the images presented in cigarette advertising change children's and young adults' attitudes about cigarettes (in general and about specific brands) in a way that makes them more likely to start using tobacco products (McCarthy 1986). Promotion could directly lead to experimentation via the distribution of free samples and the creation of environments (cigarette-sponsored concerts and sporting events) where sample distribution is facilitated and cigarette trial is actively encouraged (Popper 1986b).
2. Advertising and promotion could increase tobacco users' daily consumption of tobacco products. Advertising could serve as a cue to tobacco use by creating

attitudes and images that reinforce the "desirability" of smoking and remind smokers of occasions that are associated with smoking (Glosser 1984; Warner 1986b; Davis 1987). Promotion could act as an economic incentive to increase tobacco users' daily consumption (Popper 1986b). Coupons (either for price reductions or free products) reduce the financial cost of smoking for the consumer, which can encourage increased consumption via the price elasticity of demand (see Part II).

3. Advertising and promotion could reduce current tobacco users' motivation to quit. Tobacco ads, with their attractive imagery and implicit alleviation of fears (Altman et al. 1987), could diminish users' cessation intentions. Advertising of low-tar and -nicotine cigarettes may, in particular, have this effect (Popper 1988; Davis 1987). Promotion could weaken current tobacco users' resolve to quit by reducing the financial cost of smoking (Popper 1986b).
4. Advertising and promotion could encourage former smokers to resume smoking. Quitters experience both physiological and psychological withdrawal (US DHHS 1988). Advertising presents smokers with images reminding them of the reasons and situations in which they smoked, thereby increasing the difficulties associated with withdrawal. Promotional events (sponsored sporting events or concerts) create environments where former smokers are encouraged to resume smoking. They provide cues to smoke in the social situations in which former smokers had been likely to smoke. This effect may be enhanced by the distribution of free cigarette samples that often occurs at tobacco-sponsored events (Popper 1986b; Davis and Jason 1988).

Three indirect mechanisms by which advertising and promotion might increase tobacco consumption have also been suggested.

1. Media dependence on advertising revenues from the tobacco companies may discourage full and open discussion of the hazards of tobacco use. Reduced media attention may reduce the extent of public understanding of the health hazards. This might reduce the public's understanding of the risks of tobacco use and thereby increase tobacco use relative to what it would be in an environment in which media coverage was more extensive and was influenced solely by the inherent interest and importance of the subject (Warner 1985).
2. A number of institutions have to some degree become financially dependent on the promotional, charitable, and public relations spending of the tobacco industry, including professional sports, cultural institutions, and minority organizations. This institutional dependence on tobacco spending may create political support for, or mute opposition to, the industry's marketing and policy objectives (Taylor 1984; Warner 1986b). In turn, this may reduce public knowledge about the risks of tobacco and indirectly, encourage initiation and maintenance of tobacco use.
3. Still more broadly, the ubiquity and familiarity of tobacco advertising and promotion may contribute to an environment in which tobacco use is perceived by users to be socially acceptable, or at least less socially objectionable and less hazardous than it is in fact. Smokers might interpret the legality of tobacco advertising and promotion as an implicit message that "Smoking can't really be

all that dangerous; otherwise the government would ban cigarette advertising." Presented with that statement in a British Government survey, 44 percent of smokers agreed (Chapman 1986). This environment may contribute to the initiation of tobacco use by children and the maintenance of use by adults.

Evidence

Evidence pertaining to the effects of tobacco advertising and promotion on the consumption of tobacco products is diverse in its nature and conclusions. The research includes formal empirical analysis, informal empirical observations, and logic. Although some evidence specifically addresses issues of direct or indirect impact, much of it applies generally to the overall effect of tobacco advertising on consumption. Promotion has received less attention in the research published to date. In the following sections, the evidence cited applies to the overall effect, except as indicated. Most of the existing evidence, both analytical and experiential, relates to cigarettes and advertising. Little work has examined the effects of other promotional techniques or addresses the advertising of tobacco products other than cigarettes.

Formal Empirical Analysis

Formal empirical analysis is primarily of two types: (1) statistical studies of the relationship between aggregate cigarette advertising expenditures and aggregate cigarette consumption, using the method of regression analysis, and (2) survey research and experimental studies of smokers' and potential smokers' reactions to and recall of cigarette ads.

Regression Analyses

More than a dozen studies using regression analysis have evaluated the statistical correlation between cigarette advertising expenditures and cigarette sales in at least four western countries. Several of these analyses have found no statistically significant correlation (Schmalensee 1972; Lambin 1976; Metra Consulting Group 1979; Schneider, Klein, Murphy 1981; Johnson 1985; Baltagi and Levin 1986). At least two studies have raised the possibility that advertising expenditures are a function of cigarette sales, rather than the reverse; that is, manufacturers devote a relatively fixed proportion of revenues to advertising, and ad expenditures rise or fall as company sales increase or decrease (Schmalensee 1972; Schneider, Klein, Murphy 1981). Other analyses have identified a statistically significant relationship and concluded that, in the aggregate, increased advertising expenditures do lead to increased sales, although typically the estimated effect of advertising expenditures on consumption is small (Peles 1971; McGuinness and Cowling 1975; Lewit, Coate, Grossman 1981; Reuijl 1982; Porter 1986; Radfar 1985; Roberts and Samuelson 1988; Chetwynd et al. 1988). Still other researchers have reported consistently finding a small positive effect, but one that is not generally statistically significant (Hamilton 1972).

Only one regression study has addressed the relationship between cigarette advertising and smoking by teenagers (Lewit, Coate, Grossman 1981), despite the fact that adolescence is the period in which the vast majority of smokers initiate cigarette use

(Chapter 5). As discussed above, Lewit and colleagues examined the issue in the context of the broadcast ad ban, estimating that teenagers' smoking prevalence fell by 0.6 percent from 1970 to 1974 as a result of the ban. Although not a quantitatively substantial effect in percentage terms, it was a statistically significant finding. Given the large population of teenage smokers, even a small percentage change in smoking translates into substantial absolute numbers.

The regression studies vary considerably in methods, sophistication, and quality. Most of the studies rely on time series analysis, introducing the inherent methodological risk of unstable parameter estimates due to correlations among variables over the time periods studied. Findings may also vary because of differences in the time period studied, differences among countries, and variability in functional form specification. The better studies attempt to control for other variables that might influence the movement of both advertising expenditures and consumption, but this is handled inconsistently. Some of the studies treat advertising as having an impact only in the year of expenditure, whereas others examine both current and later (residual) effects of advertising expenditures (Peles 1971). A few use a measure of cumulative advertising expenditures, rather than single-year expenditures, in constructing the principal independent variable (Schneider, Klein, Murphy 1981). A recent study found that quarterly data produced more meaningful results than annual data; the authors speculated that "the longer time period [i.e., annual data] may mask significant relationships" (Chetwynd et al. 1988). At least one study has adopted a nondollar measure of advertising (Lewit, Coate, Grossman 1981), recognizing that the assumption of homogeneity over time in the dollar measure may not hold (Calfee 1986).

None of the studies has properly distinguished between and incorporated both conventional advertising and other promotional expenditures. This omission is particularly germane to the late 1980s, the first period in which tobacco product promotional expenditures exceeded conventional advertising (FTC 1988b) (Table 6). Moreover, regression studies have not taken into account other means of interbrand competition besides advertising and promotion. The one exception is a recent study by Roberts and Samuelson (1988), who simultaneously analyzed the effects of advertising expenditures and numbers of brands sold on the market shares of rival manufacturers. In analyses of the low-tar and high-tar U.S. cigarette markets during 1971–82, they found that firms' advertising primarily affected the level of market demand, while individual firms' market shares depended upon the number of brands sold.

Methodological differences and problems such as these restrict the meaningful interpretation and comparison of findings. Furthermore, inherent limitations in the method of regression analysis diminish the ultimate value of these analyses in addressing the two fundamental questions of interest: How much, if at all, do advertising and promotion affect the level of tobacco consumption? Would restrictions or a ban on advertising and promotion affect the level of consumption? Regression analysis is designed to assess the statistical relationship between marginal changes in an independent variable and marginal changes in the dependent variable, controlling for other factors for which data are available. Regression results do not assess the effect of large (or complete) changes in the independent variable. Consequently, the findings of regression studies, pertaining to small changes in ad expenditures, may not relate at all to the change con-

templated in a ban—the complete elimination of all advertising and promotion (Cox 1984).

There is a second theoretical reason why regression analysis might not be expected to find a sizable, significant relationship between advertising and consumption. If advertising both expands the overall market and helps firms capture existing market share from competitors, the rational level of advertising expenditure will exceed that which increases aggregate consumption alone. Thus, on the margin, the function of advertising dollars will be to compete for existing market share, not to expand the overall market. Hence, regression analyses, examining marginal effects, would not be expected to demonstrate a strong correlation between advertising expenditures and aggregate consumption (Warner et al. 1986a). In these circumstances, the fact that several of the regression studies have found statistically significant correlations has been interpreted as evidence that advertising does increase consumption (Tye, Warner, Glantz 1987).

Survey Research and Experimental Studies of Reactions to Advertisements

The second category of empirical analysis includes studies testing the hypothesis that advertising encourages children to try tobacco products and initiate related behaviors. Two types of studies fall in this category: surveys assessing recall of and reaction to cigarette ads and experimental analysis of subjects' responses to ads.

Among the surveys, the most direct approach to assessing the relationship between advertising and cigarette consumption has been to ask children or adults about the factors that influenced them to smoke. These studies typically find that advertising is ranked quite low on the list of relevant factors. Marketing experts have questioned the validity of this approach because conscious response to advertising is deemed to be a poor index of actual response (Bergler 1981; Chapman 1986). As such, studies with a similar method and opposite findings also offer little insight into the actual effects of advertising. An example is a study by Fisher and Magnus (1981), which found that most children believe that cigarette ads encourage children to smoke.

An alternative approach that employs both surveys and experiments is to assess reactions to ads and their imagery, often (then or later) correlated with subjects' reported smoking behavior. Analyses of this type range from studies asking subjects to recall cigarette brands and ad themes to experiments measuring subjects' eye contact with magazine ads (Fischer et al. 1989). Several studies have associated recognition and approval of cigarette ads with subsequent propensity to smoke (O'Connell et al. 1981; Chapman and Fitzgerald 1982; Alexander et al. 1983; McCarthy 1986; Goldstein et al. 1987). These studies are representative of the research methods used by the cigarette companies themselves to test the communications effects of their advertising (see advertising-related research presented in *Cippolone* v. *Liggett Group* 1988 and *FTC* v. *Brown and Williamson* 1983).

Collectively, these latter studies present data suggesting that cigarette ads are effective in getting children's attention and that they are recalled. In these studies, recall of prominent cigarette brand names and of ad themes is usually high. (By contrast, attention paid to the Surgeon General's health warnings and recall of them are much lower (Fischer et al., in press).) The studies find that strength of interest in the ads correlates with smoking behavior, either current or anticipated. However, the studies do not ex-

amine the causal links between this recall and smoking behavior. It is possible that smoking, or an interest in smoking, might affect awareness of ads, rather than ads encouraging smoking, a point acknowledged by the authors of some of these studies (e.g., Goldstein et al. 1987),but this possibility has not been examined with regard to cigarette advertising. The hypothesis is supported by the well-documented psychological phenomenon of perceptual vigilance (Spence and Engel 1970), whereby consumers are more aware of advertising for products they use. The opposite phenomenon, perceptual defense or selective perception (Spence 1967), helps explain why smokers avoid perceiving the warning labels and other risk-related information (FTC 1981b).

Additional Empirical Observations and Logical Arguments

The principal evidence for evaluating the role of tobacco advertising and promotion derives from the experience of advertising industry professionals and from logical analyses. Some of the latter are empirical, while others are not.

At the core of the argument that tobacco advertising affects only brand share among competitors and does not increase consumption is the contention that the market for tobacco products is a mature market, one in which market expansion cannot be achieved (O'Toole 1986). Advertising professionals who disagree have argued that market expansion is invariably a purpose of advertising. Furthermore, they have observed that it is principally in connection with two industries "under siege," tobacco and alcohol, that both producers and advertisers have made the brand-share-only argument (Foote 1981; Sharp 1986).

Proponents of the mature market argument have noted that adult per capita cigarette consumption has fallen annually since 1973; aggregate consumption has fallen each of the last 6 years (Tobacco Institute 1988); and per capita tobacco consumption is at an all-time low for this century (Grise 1984). The prevalence trends accounting for this change are particularly evident in cohort analyses that show younger birth cohorts taking up smoking in much smaller percentages than their predecessors (Chapter 5). Even in a mature market, however, the role of cigarette advertising could play a role in market maintenance, in addition to vying for brand share. In a mature or declining market, one standard strategy is to retain customers through defensive advertising and promotion (Kotler 1988). This strategy would be particularly important in the case of the cigarette market, in which an estimated 5 percent of its adult consumers are lost each year due to smoking cessation or death (from diseases related or unrelated to smoking) (Warner 1986b). It has been argued that such defensive strategies can be seen in the tobacco industry's advertising of low- and "ultra-low-tar" brands, where the goal of the campaign is not simply a shift between brands but a shift to a lower tar brand as opposed to total cessation (Popper 1988).

In opposition to the mature market argument, analysts have emphasized that although the market as a whole may be declining, segments of it appear to be actual or potential growth markets, including young women, children, blue-collar workers, and certain minority groups (Sharp 1986; Davis 1987). Industry advertising and promotion trends show increases in the relative shares of marketing budgets devoted to several of these subpopulations (Englander 1986; Albright et al. 1988).

Analysts have cited the past decade's growth in smokeless tobacco use as evidence that tobacco companies believe that advertising and promotion can be used to attract new consumers, at least for smokeless tobacco products (Connolly et al. 1986; Tye, Warner, Glantz 1987). Consequently, the mature market concept does not apply to smokeless tobacco products. Industry documents describing the marketing strategy for one smokeless tobacco product demonstrate that the company designed the low-nicotine product to serve as a "starter" product. Advertising for the product was concentrated in publications that have a high teenage male readership (Connolly 1986; Feigelson 1983). In other documents, the smokeless tobacco industry has referred to the "graduation" process from the low-nicotine starter products to more "full-flavored" products, that is, those higher in nicotine (Connolly 1986). In addition, advertisements for smokeless tobacco products have provided detailed instructions on how to use the products (Christen 1980), evidence that the marketing campaigns have been intended to attract new users.

Opponents of the position that tobacco advertising serves only to increase or maintain market share have also argued that this position is not financially consistent with the tobacco industry's marketing expenditures. A study of the economics of tobacco advertising concluded that advertising and promotion were unlikely to make financial sense if they served only brand-share function (Tye, Warner, Glantz 1987). Fewer than 10 percent of smokers change brands in any given year (Marketing and Media Decisions 1985). The current advertising and promotion expenditures of the domestic cigarette companies are greater than the sales revenues represented by those brand switchers (Popper 1986b). Furthermore, two companies, Phillip Morris and R.J. Reynolds, control more than two-thirds of the American cigarette market. Much of the limited brand switching that occurs is necessarily between brands of the same company. Based on such observations, it has been argued that the behavior of the tobacco industry itself supports the conclusion that the industry perceives a positive association between advertising and consumption (Warner 1986b).

Much of the empirically based evidence pertaining to the effects of advertising comes from international comparisons. Support for the view that cigarette advertising serves to expand the market comes from the observation that in several countries in which cigarettes are a state monopoly, the state enterprise advertises. If advertising served solely to redistribute smokers among brands, there would be no reason to advertise in such countries (Chapman and Vermeer 1985). Support for the view that advertising does not influence consumption levels has been sought in the experience of countries that have never permitted cigarette advertising, such as the Communist bloc countries, where cigarette consumption is high and has grown rapidly in the absence of advertising (Waterson 1982; Boddewyn 1986). The relevance of this observation has been challenged, however, on the ground that the issue is not whether advertising is the only, or even the most important, determinant of smoking trends. The relevant question, which these comparisons of countries do not and cannot address, is whether the rate of increase in tobacco consumption would have been affected by advertising (Warner et al. 1986a).

Indirect Mechanisms: Media Coverage of Smoking

The variety of potential indirect influences of tobacco advertising and promotion reflects the magnitude and diversity of expenditures (Taylor 1984; Warner 1986b; FTC 1988b). A substantial body of evidence exists only in one case: the relationship between cigarette advertising revenues and coverage of smoking and health in the media, especially in magazines. The public health relevance of this relationship is based on the assumption that discussion of the hazards of tobacco alters public knowledge of and opinions about tobacco use. Through a complex set of social and individual response mechanisms, knowledge and attitude changes evolve into reductions in smoking. Thus, if the media have restricted coverage of the hazards of tobacco for fear of losing advertising revenue, the public has been deprived of information that might have improved knowledge or changed social opinion more rapidly or extensively, thereby leading to reduced levels of smoking and the associated disease toll (Warner 1985).

Most of the evidence linking the level of cigarette advertising revenue to the degree

TABLE 7.—Cigarette advertising revenues and coverage of smoking and health, selected magazines

	Years surveyed	Percentage of health articles discussing smoking	Cigarette advertising revenue as percentage of total ad revenue
Reader's Digest	1965–81	34.4	0
Good Housekeeping	1965–81	22.1	0
Prevention	1967–78	15.4	0
Vogue	1965–81	11.7	5.1
U.S. News and World Report	1965–81	7.4	14.6
Ladies' Home Journal	1968–81	7.1	16.3
Time	1965–81	6.9	17.2
Harper's Bazaar	1968–81	4.5	7.1
McCall's	1969–80	4.5	15.1
Newsweek	1969–81	2.9	15.8
Cosmopolitan	1971–81	2.3	9.4
Mademoiselle	1966–81	1.9	7.3
Ms.	1972–81	0	14.8
Redbook	1970–81	0	16.1

NOTE: Magazines listed included a minimum of 60 health-related articles in the years surveyed.
SOURCE: Dale (1982).

of media coverage of smoking and health has been developed recently; some of it, however, dates back half a century (Seldes 1941). Formal analytical studies of the phenomenon that control for potential confounding influences are limited in number;

existing analyses are based primarily on correlations between magazines' cigarette advertising revenues and their coverage of smoking and health (Whelan et al. 1981; Dale 1982; Jacobson and Amos 1985; White and Whelan 1986; Warner and Goldenhar, in press).

One of these studies found that between 1967 and 1979, there were a total of 8 feature articles that seriously discussed quitting or the dangers of smoking in 10 prominent women's magazines that carry cigarette advertisements. Of the 10 magazines, 4 carried no antismoking articles in the entire 12-year period. By contrast, 2 prominent magazines that do not accept cigarette advertising, *Good Housekeeping* and *Seventeen*, ran 11 and 5 such articles, respectively. On average, the magazines that accepted cigarette advertisements published from 12 to 63 times as many articles on individual topics such as nutrition, contraception, stress, and mental health as they did on the antismoking theme. The ratio was much smaller for *Good Housekeeping* and *Seventeen* (Whelan et al. 1981). In another empirical study by the same organization, researchers examined coverage of smoking and health in prominent magazines recognized for their general interest in health matters. Publications selected for study published at least 60 articles on health topics between 1965 and 1981. The proportion of health articles devoted to smoking was compared with the proportion of advertising revenues derived from cigarette advertisements. Only four of the magazines had as many as 10 percent of their health-related articles devoted to smoking. Of these four, the top three did not accept cigarette advertising. The fourth had the lowest proportionate share of advertising income derived from cigarette ads of the remaining magazines. There was no substantial correlation between the volume of advertisements and smoking coverage within the remaining magazines (Dale 1982; Table 7).

A more recent study compared changes over time in coverage of smoking and health by 39 national magazines that published cigarette ads and 11 magazines that did not. The study also compared these changes with those found in coverage by *The New York Times* and *The Christian Science Monitor*, as well as with the collective cigarette advertising revenue of the first group of magazines. The two newspapers were selected as measures of the "inherent newsworthiness" of the subject. Comparing two 11-year periods, one preceding the broadcast media ban on cigarette advertising (1959–69) and the other following it (1973–83), the authors found that (1) the magazines that included cigarette ads experienced an increase in real cigarette ad revenues, controlling for inflation, of 727 percent (cigarette ads rose from 1.9 percent of total magazine ad revenues in the first period to 11.0 percent in the second); (2) these magazines decreased their coverage of smoking and health by 65 percent, while the magazines that did not carry cigarette ads decreased their coverage by 29 percent, a statistically significant difference; (3) the two newspapers' coverage fell by 21 percent (the *Times*, which accepts cigarette advertising) and 3 percent (the *Monitor*, which accepts no cigarette advertising). Both decreases were significantly smaller than that of the magazines that included cigarette ads, but not significantly different from that of the magazines not including cigarette ads (Warner and Goldenhar, in press).

In addition to these correlational studies, there is extensive anecdotal evidence about the influence of advertising revenues on magazine coverage of smoking and health. Writers, editors, and publishers have described numerous instances of purported cen-

sorship attributed directly to publications' fears of alienating cigarette advertisers (Smith 1978; Whelan et al. 1981; Bagdikian 1983; Warner 1985; Okie 1985; Magnus 1986). Although the anecdotal evidence pertains mainly to magazines, it includes other media, including newspapers (ABC News 1983; Gitlitz 1983) and the broadcast media prior to the removal of cigarette ads (Bagdikian 1983). Furthermore, there are allegations of advertising-induced censorship related to other tobacco products, such as smokeless tobacco (Connolly 1986).

Federal Advertising Restrictions

The Federal agency responsible for regulating the advertising of tobacco and other consumer products is the FTC. The Federal Trade Commission Act of 1914, amended in 1938, empowers the FTC "to prevent persons, partnerships, or corporations . . . from using unfair or deceptive acts or practices in commerce" (Wagner 1971b).

The FTC's efforts to regulate unsubstantiated claims in tobacco advertisements began well before 1964. From the 1930s through the 1950s, many cigarette advertisements made claims that smoking the advertised brand improved health or at least offered health benefits compared with smoking other brands (Neuberger 1963; Tye 1986). Between 1938 and 1968, the Commission invoked its adjudicatory (quasi-judicial) authority 25 times with respect to cigarette advertising (Fritschler 1969). Between 1945 and 1960, the Commission completed seven formal cease-and-desist order proceedings against cigarette manufacturers involving medical or health claims made in advertising (FTC 1964b). For example, according to Wagner (1971b):

> A 1945 complaint lodged against R.L. Swain Tobacco prohibited representations that respondent's cigarettes were endorsed or approved by the medical profession; that they would soothe the nose, throat, or mouth; that they contained no irritating properties; and that they produced little or no stain on fingers and teeth. In 1950, the FTC moved successfully to curb R.J. Reynolds Tobacco Company from claiming that Camels aided digestion; did not impair the wind or physical condition of athletes; would never harm or irritate the throat or leave an aftertaste; were soothing, restful, and comforting to the nerves; and contained less nicotine than any of the four other largest selling brands. A 1942 complaint against Brown and Williamson Tobacco Company prohibited claims that Kools would keep the head clear in winter and give extra protection against or cure colds.

Because the adjudicatory judgments obtained by the FTC applied only to the parties to the case, other cigarette companies engaging in the same or similar deceptive acts were not immediately affected. Fritschler (1969) concluded that "in the case of cigarette advertising, the Commission found itself putting out brush fires of deception while the inferno raged on." The FTC first promulgated industrywide cigarette advertising guidelines in September 1955. These guidelines were "for the use of its staff in the evaluation of cigarette advertising" (FTC 1964b), as opposed to formal trade regulation rules, which would have the force of law. The guidelines, among other things, sought to prohibit: (1) representations in cigarette advertising of medical approval of cigarette smoking in general or of smoking a particular brand; (2) advertising claims that referred either to the presence or absence of any physical effects relating to cigarette

smoking in general or smoking a particular brand, or relating to filters or filtration; and (3) unsubstantiated advertising claims relating to tar and nicotine levels.

In June 1962, the FTC announced the adoption of general rule-making procedures, which it used on three occasions the following year to regulate various nontobacco products (Fritschler 1969). As noted in the section on warning labels, 11 days after the release of the 1964 Report of the Surgeon General's Advisory Committee on Smoking and Health, the FTC announced three proposed trade regulations on cigarette labeling and advertising (FTC 1964a). Rule 2 would have strictly regulated the imagery and copy of cigarette ads in order to prohibit explicit or implicit health claims. However, the proposed rule was vacated (FTC 1965) after the Federal Cigarette Labeling and Advertising Act of 1965 (Public Law 89-92) was signed into law. In the meantime, in April 1964, the major U.S. cigarette manufacturers had adopted their own Cigarette Advertising Code, intended to apply to broadcast advertising. It prohibited making health claims in advertisements and directing advertising to young people. Cigarette manufacturers agreed to avoid ads that represented "cigarette smoking as essential to social prominence, distinction, success, or sexual attraction" and to avoid showing smokers engaged in activities "requiring stamina or athletic conditioning beyond that of normal recreation" (Ernster 1988; Friedman 1975).

In its 1968 report to Congress, the FTC recommended a ban on cigarette advertising on television and radio (FTC 1968). In February 1969, the FCC announced a proposed trade regulation rule that would have banned cigarette commercials from television and radio (FCC 1969). On July 8, 1969, the National Association of Broadcasters announced a plan to phase out all cigarette advertising on the air over a 3-year period beginning January 1, 1970 (Whiteside 1971). At a Senate subcommittee hearing 2 weeks later, the cigarette industry offered voluntarily to end all cigarette advertising on television and radio by September 1970, provided that Congress would grant the companies immunity from antitrust laws to allow them to act in concert (Whiteside 1971). Ultimately, Congress approved the Public Health Cigarette Smoking Act of 1969, which was signed into law on April 1, 1970. The Act prohibited cigarette advertising in the broadcast media effective January 2, 1971.

Subsequent Federal legislation extended the ban on advertisements in the broadcast media to little cigars and to smokeless tobacco products. In September 1973, the Little Cigar Act of 1973 (Public Law 93-109) banned broadcast advertising of "little cigars," defined as "any roll of tobacco wrapped in leaf tobacco or any substance containing tobacco . . . as to which one thousand units weigh not more than three pounds." Over a decade later, smokeless tobacco advertising in the broadcast media was banned by the Comprehensive Smokeless Tobacco Health Education Act of 1986 (Public Law 99-252). The ban took effect on August 27, 1986.

In recent years, the FTC has again had its attention drawn to the content of print advertising. As discussed in a prior section, the FTC successfully obtained an injunction against one manufacturer for incorrectly stating the tar yield of one cigarette brand, Barclay, in packaging and advertising (*FTC* v. *Brown and Williamson* 1983). In addition, the Tobacco Institute (Tobacco Institute 1983) and R.J. Reynolds (RJR) have advertised in national print media with statements that challenged the link between smoking (active and involuntary) and disease.

During 1985, RJR published an advertisement (R.J. Reynolds 1985a) entitled "Of Cigarettes and Science," which discussed, among other things, the procedures that scientists use to test scientific hypotheses, and presented information about the Multiple Risk Factor Intervention Trial (MRFIT) (MRFIT Research Group 1982). In April 1985, the American Heart Association, the American Cancer Society, and the American Lung Association, acting through the Coalition on Smoking OR Health, petitioned the FTC with regard to this ad. On June 16, 1986, the FTC issued a complaint alleging that the advertisement falsely and misleadingly represented that the purpose of the MRFIT study was to determine whether heart disease is caused by smoking, that the MRFIT study provides credible scientific evidence that smoking is not as hazardous as the public has been led to believe, and that the MRFIT study tends to refute the theory that smoking causes coronary heart disease. The complaint also charged that in light of the representations made in the ad, the advertisement failed to disclose certain material facts about the study, specifically, that the men in the study who quit smoking had a significantly lower rate of coronary heart disease than men who continued to smoke and that the study results are consistent with previous studies showing that those who quit smoking experience a substantial decrease in coronary heart disease mortality.

On June 26, 1986, RJR moved to dismiss the complaint on the grounds that the advertisement was noncommercial speech that was fully protected by the first amendment, even if it was false and deceptive. An Administrative Law Judge agreed and dismissed the complaint on August 4, 1986. In an order and decision dated March 4, 1988, the FTC reversed the judge's order, holding that "the content of the Reynolds advertisement includes words and messages that are characteristic of commercial speech." RJR unsuccessfully appealed this decision to the U.S. Court of Appeals of the District of Columbia; trial before an FTC Administrative Law Judge on this matter is set for January 30, 1989. (Also see White 1987.) (As of October 1988, all documents related to this administrative matter were maintained in FTC Docket No. 9206.)

State and Local Advertising Restrictions

The preemption clause of the Public Health Cigarette Smoking Act of 1969 (Public Law 91-222) prevents States from regulating or prohibiting cigarette advertising or promotion for health-related reasons. The Act defines "State" to include "any political division of any State." This preemption was left intact by subsequent congressional legislation, including the 1984 Comprehensive Smoking Education Act (Public Law 98-474), which amended other sections of the original law, such as the requirement for warning labels. The stated purpose of the preemption was "to avoid the chaos created by a multiplicity of conflicting regulations" (U.S. Senate 1970). There is no preemption of State and local advertising restrictions for smokeless tobacco in the Comprehensive Smokeless Tobacco Health Education Act of 1986 (Public Law 99-252), although the Act does prevent States from requiring additional warning labels on smokeless tobacco products or advertisements.

States and localities may have some jurisdiction in regulating the location of advertising when the medium is not national in scope. For example, cities may be able to prohibit tobacco advertising on their transit systems. The extent of such jurisdiction is

not clear from the preemption clause itself, and there is no body of case law. Several States and local jurisdictions have adopted statutes or regulations banning certain types of purely local cigarette advertising or promotion. The most common restrictions, described below, are bans on transit advertising and on the distribution of free cigarette samples. In some cases, these regulations apply to all tobacco products. None of these policies has been challenged in court.

The strongest State law has been adopted in Utah, where tobacco advertisements are banned on "any billboard, streetcar sign, streetcar, bus, placard, or on any other object or place of display" (Utah 1978). Bans on tobacco advertising in public transit systems have been adopted in several cities. In August 1984, the Board of Directors of the Regional Transportation District in the Denver, CO, area voted to prohibit transit advertising for tobacco products and alcoholic beverages on its buses and in its two downtown transit centers (Schmitz 1984). Similarly, the Massachusetts Bay Transportation Authority (MBTA) in the Boston metropolitan area adopted an administrative policy prohibiting tobacco advertisements on buses and trollies and in stations, effective October 1986 (Boston Herald 1986). The town of Amherst, MA, enacted a bylaw prohibiting tobacco advertising "on or in any bus, taxicab, or any other vehicle used for public transportation" within the town in 1987 (Amherst 1987). The Bay Area Rapid Transit (BART) District in the San Francisco Bay Area of California has eliminated the advertising of tobacco products and alcoholic beverages from its trains and stations. BART covers San Francisco, Alameda, and Contra Costa counties. Based on a vote of the BART Board of Directors, the policy was phased in between May 1987 and May 1988 to allow existing advertising contracts to expire (Collier 1987).

In Minnesota, the Metropolitan Sports Commission voted in January 1988 to end tobacco advertising in Minneapolis' professional sports stadium, the Hubert H. Humphrey Metrodome. The new policy will take effect after expiration of the existing 10-year cigarette advertising contract in 1992. Cigarette advertising revenue under this contract has been approximately 300,000 dollars per year (Marty 1987).

Cities and States have also acted to restrict or ban the distribution of free tobacco product samples, a major form of tobacco promotion. At least 14 cities have banned all distribution of free samples; these include Minneapolis, St. Paul, and Albert Lea, MN; Boston, Newton, Cambridge, Amherst, Somerville, and Worcester, MA; Honolulu, HI; Bowie, MD; Atlanta, GA (Davis and Jason 1988); Austin, TX (Austin 1988); and Cincinnati, OH (Smith 1988). The earliest of these ordinances were adopted by Minneapolis and St. Paul in 1979. Two States (Utah and Minnesota) have prohibited the distribution of free smokeless tobacco samples (Davis and Jason 1988). A larger number of States and cities have banned the distribution of free samples to minors, although the success in enforcing these selective sampling restrictions is uncertain. (See Part III, section on minors' access to tobacco.)

Effects of Government Actions to Restrict Tobacco Advertising

In general, there has been little formal evaluation of the impact of government actions concerning tobacco advertising and promotion.

The relationship between government policy and tobacco consumption has been studied only in the case of the Fairness Doctrine and the subsequent ban on cigarette advertising in the broadcast media. Evaluation of the effectiveness of the broadcast ad ban is complicated by three factors. First, the ban removed the obligation of stations to air the Fairness Doctrine PSAs. To the extent that the PSAs were effective in discouraging smoking, their disappearance serves to undermine any positive effect from the broadcast advertising ban. Second, the savings from reduced advertising in the short term may have allowed the cigarette companies to hold down the price of cigarettes temporarily, which in turn would have served to increase sales (Schneider, Klein, Murphy 1981). Third, after several years of reduced advertising expenditures following the broadcast advertising ban, the cigarette industry dramatically increased expenditures for print media advertising (especially billboards) and for promotional activities (Warner 1986b; Popper 1986a; Davis 1987). To the extent that cigarette advertising in these media and other promotional activities may increase total sales, this also may have served to decrease the net effectiveness of the broadcast ban.

As mentioned in the previous section on the broadcast media, per capita cigarette sales decreased by 6.9 percent during the 3-year period (1968–70) when PSAs were mandated by the Fairness Doctrine, but increased by 4.1 percent during the 3-year period (1971–73) following the end of Fairness Doctrine PSAs and the beginning of the broadcast advertising ban. This suggests that any beneficial effects of the broadcast ad ban may have been outweighed by disappearance of the PSAs, at least in the short run. In a regression analysis of the effects of both cigarette ads and the Fairness Doctrine PSAs, Hamilton (1972) found that the antismoking PSAs retarded per capita cigarette consumption far more than the cigarette ads boosted it. In an analysis taking into account cigarette price, advertising, and counteradvertising, Schneider, Klein, and Murphy (1981) concluded that the net effect of the broadcast advertising ban was to increase cigarette consumption. However, Hamilton (1972) and Warner (1979) both suggested that the net effect of the two policies may have been to increase cigarette consumption in the short term, although they cautioned that the net effect in the long term is difficult to gauge.

It is difficult to evaluate the effect on smoking behavior of FTC actions to regulate the content of advertising. FTC rulings did block misleading advertising, but as the MRFIT case demonstrates, the regulatory process is slow. Delays inherent in the regulatory process limit the impact of the ultimate decisions.

The effect on smoking behavior of State and local restrictions on cigarette advertising and promotion is not known because no evaluations have been conducted. No data are available regarding the effectiveness of sampling bans in reducing the availability of cigarettes. Even if such policies have no direct influence on smoking, however, these restrictions (and the publicity surrounding their enactment) may promote increased public awareness of the issue of smoking and health and may serve as important symbols of social disapproval of tobacco use.

More is known about the financial impact of local advertising bans on transit authorities, for whom the bans result in lost advertising revenue. Information from two of the four jurisdictions that have enacted transit tobacco advertising bans indicates that transit authorities have been able to recoup lost advertising revenue in a relatively short

time. Cigarette advertisements accounted for approximately 800,000 dollars, or 36 percent, of MBTA's 2.2 million dollars in advertising revenue in 1985 (Boston Herald 1986; AdEast 1986). According to MBTA, it regained its previous (1985) level of advertising revenue in 1987 (Grealy 1988). Similarly, in San Francisco, BART officials reported only a minimal, temporary advertising revenue loss during the year of implementation (Healy 1988). The effect, if any, of transit and sampling bans on national advertising and promotional expenditures by tobacco companies is unknown.

Policies Under Consideration

Currently, as reviewed above, the Federal Government bans tobacco advertising in the broadcast media and regulates the content of tobacco advertising by FTC actions and by the requirement that warning labels appear on cigarette and smokeless tobacco advertisements. A number of proposals that would further restrict tobacco advertising and promotion are now under consideration by the public health community, State legislatures, and Congress. Some of the proposals are mutually exclusive and should be considered as alternatives, whereas others could coexist. Nationally prominent proposals are mentioned here. Their major strengths and weaknesses are considered in detail elsewhere (Warner et al. 1986a).

One group of proposals would have the Government more stringently regulate the imagery and content of advertising, either by developing and enforcing an advertising and promotion code or by severely restricting the permissible format of advertisements; the latter is so-called "tombstone advertising." With the former approach, a code defining permissible imagery in advertisements and a mechanism to ensure monitoring of and compliance with the code would have to be developed and implemented. For such a code to be effective, it would have to encompass both advertising and nonadvertising forms of promotion, the latter of which now represents over half of total cigarette advertising and promotional expenditures (FTC 1988b). The advantages and disadvantages of such a code have been discussed (Taylor 1984; FTC 1981b; Warner et al. 1986a). An alternative proposal would limit the imagery and graphics of tobacco advertisements to so-called "tombstone advertising," with no models, slogans, scenes, or colors permitted. The tombstone proposal does not address other forms of promotion. The merits of this proposal are considered elsewhere (e.g., FTC 1981b; Warner et al. 1986a).

A second set of proposals would restrict the availability of tobacco advertising and promotion. These range from a total ban on all advertising and promotion to more limited policies that would prohibit advertising in certain media; prohibit certain promotional techniques, such as the distribution of free tobacco product samples (Davis and Jason 1988); or ban advertising and promotion accessible to children. Currently, the most widely discussed proposal is to ban all forms of advertising and promotion for all tobacco products. The proposal's prominence reflects its advocacy by organizations such as the American Medical Association, American Cancer Society, American Heart Association, American Lung Association, and American Public Health Association, and the fact that it has been the basis of several bills before Congress (e.g., H.R. 1272, 100th Congress, 1st Session) and the subject of congressional hearings (Subcommittee

on Health and the Environment 1986). A total ban on tobacco advertising and promotion was enacted in Canada in June 1988, scheduled to go into effect in stages beginning January 1, 1989 (Burns 1988; House of Commons of Canada 1988).

The ad ban proposal raises a wide range of complex issues whose full discussion is beyond the scope of this Report and has been covered elsewhere (Warner et al. 1986a). The most visible and fundamental is the question of commercial free speech: What is the right of the producers of a legal product to advertise and what is the right of consumers to have access through advertisements to information on legal products (White 1984; Miller 1985; Weil 1986; Neuborne 1986; Reimer 1986; Covington and Burling 1986; Blasi and Monaghan 1986, 1987)? Among the more pragmatic issues is concern that withdrawal of cigarette advertising and tobacco company sponsorship might jeopardize the existence of some publications, advertising agencies, and sports and arts institutions (Warner 1986b). From a public health perspective, the central issue is one of effectiveness: Would an advertising ban in fact achieve its desired end—reductions in smoking prevalence? If so, would a less restrictive policy achieve the same effect without raising first amendment concerns?

A third set of proposals seeks to neutralize the influence of advertising by mandating the publication or broadcast of antitobacco messages by the media. An example of this so-called "counteradvertising" was the FCC requirement for antismoking PSAs in the broadcast media under the Fairness Doctrine from 1967 through 1970; these were discussed in a previous section. The apparent effectiveness of these PSAs led to proposals for the Government to establish a source of substantial and continuous funding for an antitobacco advertising campaign (Warner 1986b,c). Several mechanisms have been proposed to raise the resources for a paid campaign. One would require tobacco advertisers to pay for an amount of counteradvertising space that is equivalent to or some fraction of what they devote to protobacco advertising. Another proposal would earmark a proportion of the Federal cigarette excise tax to fund a paid counteradvertising campaign (Warner 1986c).

A fourth approach seeks to create an economic disincentive for tobacco manufacturers to advertise by eliminating their ability to deduct tobacco advertising and promotional expenditures as business expenses for income tax purposes. This proposal has also been put into the form of congressional legislation (S. 446, 100th Congress, 1st Session, and H.R. 1563, 100th Congress, 1st Session) and its merits have been debated in congressional hearings (Weil 1986; Stark 1986; Bradley 1986).

The majority of proposals to restrict tobacco advertising and promotion are designed for action at the Federal level, because current Federal legislation preempts States from regulating cigarette advertising. Repeal of the Federal preemption clause has been proposed as a means of encouraging State and local regulatory actions (Bailey 1986; Warner et al. 1986a).

Summary

There is no scientifically rigorous study available to the public that provides a definitive answer to the basic question of whether advertising and promotion increase the level of tobacco consumption. Given the complexity of the issue, none is likely to be

forthcoming in the foreseeable future. The most comprehensive review of both the direct and indirect mechanisms concluded that the collective empirical, experiential, and logical evidence makes it more likely than not that advertising and promotional activities do stimulate cigarette consumption. However, that analysis also concluded that the extent of influence of advertising and promotion on the level of consumption is unknown and possibly unknowable (Warner 1986b). This influence relative to other influences on tobacco use, such as peer pressure and role models, is uncertain. Although its effects are not wholly predictable, regulation of advertising and promotion is likely to be a prominent arena for tobacco policy debate in the 1990s. In part this reflects the high visibility of advertising and promotion; in part it reflects the perception that these activities constitute an influence on tobacco consumption that is amenable to government action.

Reporting Requirements

Current Federal legislation mandates that DHHS and the FTC issue reports to Congress on tobacco-related subjects at regular intervals. By virtue of the extensive media coverage and wide dissemination of many of these reports, they often provide information not only to Congress but also to the general public, journalists, other policymakers, health professionals, and researchers.

Surgeon General's Reports

As discussed in Chapter 1, the Federal Cigarette Labeling Act of 1965 and the Public Health Cigarette Smoking Act of 1969 require that the Secretary of Health, Education, and Welfare (now the Secretary of Health and Human Services) transmit an annual report to Congress on current information about the health consequences of smoking and such recommendations for legislation as he or she may deem appropriate. This Report is the 20th in the series of reports on the health consequences of smoking, generally referred to as Surgeon Generals' Reports, which began with the 1964 Report of the Surgeon General's Advisory Committee on Smoking and Health. The 1986 Report of the Advisory Committee to the Surgeon General, *The Health Consequences of Using Smokeless Tobacco* (US DHHS 1986c), was not produced in response to a specific legislative mandate.

Biennial Status Reports

The Comprehensive Smoking Education Act of 1984 requires the Secretary of Health and Human Services to transmit a report to Congress biennially containing the following information about smoking control efforts: (1) an assessment of Federal activities to inform the public; (2) a description of the extent of public knowledge about the health consequences of smoking; (3) a report of the activities of the Federal Interagency Committee on Smoking and Health, the research and educational activities of DHHS relating to smoking, and State and local laws relating to the use and consumption of cigarettes; (4) information on private actions taken to reduce the effects of smoking on

health; and (5) recommendations for legislation and administrative action that the Secretary deems appropriate. The first such report, entitled *Smoking and Health: A National Status Report*, was released in November 1986 (US DHHS 1986e).

A similar reporting requirement exists for smokeless tobacco. The Comprehensive Smokeless Tobacco Health Education Act of 1986 requires that the Secretary of Health and Human Services transmit a report to Congress biennially on (1) the effects of health education efforts on the use of smokeless tobacco products, (2) the public's use of smokeless tobacco products, (3) the health effects of smokeless tobacco products and areas appropriate for further research, and (4) appropriate legislation and administrative action. The first report pursuant to this requirement was released in May 1987 (US DHHS 1987a).

Federal Trade Commission Reports

The Federal Cigarette Labeling and Advertising Act of 1965 and the Public Health Cigarette Smoking Act of 1969 require the FTC to transmit an annual report to Congress concerning (1) the effectiveness of cigarette labeling, (2) current practices and methods of cigarette advertising and promotion, and (3) such recommendations for legislation as it may deem appropriate. The first provision was eliminated by the Comprehensive Smoking Education Act of 1984. FTC Reports have been submitted annually to Congress since 1967. These reports generally include data on aggregate and per capita cigarette sales, domestic market share of filter and nonfilter cigarettes and menthol and nonmenthol cigarettes, domestic market share by cigarette length and tar and nicotine yields, and cigarette advertising and promotional expenditures broken down by type of advertising or promotion and type of cigarette (FTC 1988b). The tar, nicotine, and carbon monoxide yields of all cigarettes are to be provided in future reports.

The Comprehensive Smokeless Tobacco Health Education Act of 1986 requires that FTC report to Congress every other year on current sales, advertising and marketing practices, and recommendations for legislative or administrative action.

Effectiveness

One method for assessing the effectiveness of reporting requirements as a means of disseminating information is to evaluate the quantity and quality of information made available and the extent to which policymakers and the public are aware of the reports or their contents. The information in these reports may influence policy development, tobacco use, and public awareness of the health effects of smoking, but these relationships are difficult to measure. In fact, there has been little formal evaluation of reporting requirements or the reports themselves on any of these outcomes.

There is some empirical evidence that the Surgeon General's Reports, or at least the first Report in 1964, may have had a direct or indirect effect on cigarette consumption. Adult per capita consumption of manufactured cigarettes in the United States (total cigarettes consumed annually divided by the population 18 years of age and older) reached an all-time high of 4,345 in 1963. After the release of the 1964 Report of the

Surgeon General's Advisory Committee on Smoking and Health (US PHS 1964) and the attendant publicity, per capita consumption fell to 4,195 in 1964 before increasing to 4,259 in 1965 (Chapters 5 and 8). In an analysis comparing actual cigarette consumption to projections based on previous trends, Warner (1977, 1981, 1989) estimated that the Advisory Committee's Report and associated publicity induced a 5-percent decrease in cigarette consumption in 1964. Schneider, Klein, and Murphy (1981) estimated that the 1964 Report decreased per capita consumption of tobacco by 39 percent during the 1964–78 period. Similarly, British researchers (Russell 1973; Peto 1974) have credited the Royal College of Physicians' 1962 Report on Smoking and Health with decreasing cigarette consumption 4.6 to 9 percent that year. No published studies have evaluated the effects of other Surgeon General's Reports upon tobacco use. The impact of the 1964 Surgeon General's Advisory Committee Report may be unsurpassed, compared with that of subsequent reports, because of the widespread publicity surrounding the first Report and the "newness" of its findings.

Public knowledge of the health hazards of tobacco use has increased substantially since 1964 (Chapter 4). Because of the many factors that may have affected public knowledge and attitudes about smoking, it is difficult to estimate the degree to which the Surgeon General's Reports have by themselves influenced beliefs, attitudes, and opinions. Despite the lack of empirical data, it is widely acknowledged that the Surgeon General's Reports have become recognized as authoritative documents and summaries of the literature on the health consequences of smoking (Walsh and Gordon 1986). The quality of the reports can be attributed, at least in part, to the large number of expert contributors and an extensive peer review process (summarized in the acknowledgments of this and previous reports). Because of the large and expanding literature on tobacco and health, there is no doubt that the Surgeon General's Reports have served a useful purpose by providing detailed and current reviews of information on tobacco and health.

One of the principal intended audiences of the 1988 Surgeon General's Report on Nicotine Addiction (US DHHS 1988) was physicians. Two weeks after the release of the Report, Lakeside Pharmaceuticals sponsored a telephone survey of 159 randomly selected physicians from three primary care specialities. Ninety-one percent of physicians interviewed knew about the Report, and 70 percent thought that the conclusions of the Report would alter the way physicians treat patients for smoking (Ad Factors/Millward Brown 1988). These data suggest that the Report was effective in conveying information on smoking to health care providers.

The findings of the Surgeon General's Reports have often been cited as the scientific basis for public and private policies designed to reduce tobacco use. Similarly, the findings and legislative recommendations of FTC reports have been cited in support of strengthening existing cigarette warning labels. For example, in the legislative history of the Public Health Cigarette Smoking Act of 1969, the Senate Report (U.S. Senate 1970) recommended a stronger cigarette warning label by citing the findings of previous Surgeon General's Reports, the conclusion of the 1967 FTC Report that the original warning label was ineffective, and the legislative recommendation of the 1969 FTC Report for a stronger warning label. Thus, although empirical data are lacking, anecdotal reports suggest that the mandated Federal Government documents have played an important role in providing a knowledge base to support the development of smoking control policies.

Government Expenditures and State Smoking Control Plans

Government activities on smoking and health have, for the most part, been informational and educational. The extent of these activities is determined in part by the availability of funds to support them. Funding, in turn, reflects broad government priorities. Consequently, government decisions about expenditures on smoking and health can be considered as "policies" and will be reviewed in this Section.

Federal Expenditures

There are two sources of information about Federal expenditures on smoking and health. The Office on Smoking and Health (OSH), the successor of the National Clearinghouse for Smoking and Health (NCSH), is the only Federal office wholly devoted to smoking control. Its activities (Chapter 6) include providing information and education to health professionals, policymakers, and the general public and sponsoring national surveys of smoking behavior. Its budget is an index of categorical appropriations for activities related to smoking and health. In addition, since 1979, agencies within DHHS have reported their expenditures in 15 prevention priority areas, including smoking and health, to the Office of Disease Prevention and Health Promotion. This information has been published for fiscal years 1979 through 1981 and 1983 through 1986 (US DHHS 1981b, 1982b, 1985b, 1987b) and includes a list of projects funded by each reporting agency.

The budgets of OSH and NCSH are shown in Table 8 for fiscal years 1966 through 1988. Congressional appropriations designated for "smoking and health" have increased from 2.0 million dollars in 1966 to 3.5 million dollars in 1988. Expressed in constant 1966 dollars, the 1988 appropriation is 0.95 million dollars, 48.5 percent of the 1966 appropriation. For the past 5 years, the annual budget of OSH in current dollars has been approximately 3.5 million dollars.

Expenditures on smoking and health reported by agencies within DHHS for fiscal years 1979 through 1981 and 1983 through 1986 (US DHHS 1981b, 1982b, 1985b, 1987b) are shown in Table 9. Reported expenditures increased from approximately 21 million dollars in fiscal year 1979 to approximately 40 million dollars in fiscal year 1986. Increased expenditures by several agencies contributed to this change, but it is primarily attributable to sharply increased allocations by the National Cancer Institute (Chapter 6). Expenditures on smoking and health have accounted for a growing share of all DHHS prevention efforts, but remain a small proportion of the total prevention budget. In fiscal year 1986, smoking and health activities accounted for 1.0 percent of the DHHS prevention budget (4.1 billion dollars) and 1.2 percent of the Public Health Service's prevention budget (3.3 billion dollars) (US DHHS 1987b).

The data on expenditures reported by DHHS agencies should be interpreted with caution. These figures may vary slightly from figures contained in other documents because each agency applied its own criteria, within general guidelines, for identifying these expenditures. In addition, some prevention expenditures within certain block grants or certain programs (e.g., medicaid) are not accessible by current reporting systems and thus may not be included in these figures.

It should also be noted that these data do not include possible expenditures on smoking and health by other Federal departments or agencies. For example, the Department of Defense (DOD) has recently funded approximately 97,000 dollars in publications and 324,000 dollars in radio and television messages relating to smoking and health. Many of the radio and television spots are being used in the Armed Forces Radio and Television Network overseas (US DOD 1987). DOD has received assistance from voluntary health agencies in disseminating information and materials to military service members (US DOD 1987) (Chapter 6). These data also do not include Federal agency expenditures on tobacco where the goal is not smoking control. Examples of this are the Department of Agriculture's tobacco agriculture program (Warner 1988) and efforts by the Office of the U.S. Trade Representative to secure freer access to foreign markets for American cigarette manufacturers (Connolly 1987).

TABLE 8.—Appropriated funds and positions for the Office on Smoking and Health (OSH) (1978–87) and its predecessor, the National Clearinghouse for Smoking and Health (NCSH) (1966–77)

Fiscal year	Appropriated funds[a] (millions of dollars)[b]	Positions[c]
1966 (NCSH)	1.955	30
1967	2.144	37
1968	2.075	37
1969	2.100	35
1970	2.250	35
1971	2.156	29
1972	2.380	43
1973	1.600 (+ 0.306)[d]	43
1974	0.986 (+ 1.862)[d]	36
1975	1.028 (+ 0.813)[d]	35
1976	0.825 (+ 0.295)[d]	12
1977	1.200	12
1978	1.200	12
1979 (OSH)	2.500	12
1980	2.519[e]	25
1981	2.062[e]	25
1982	1.944	23
1983	2.098	21
1984	3.521	21
1985	3.538	17
1986	3.375[f]	17
1987	3.471	18
1988	3.466	18

[a]The difference between these figures and those in Table 9 reflect the fact that the figures in Table 9 may exclude salaries and other "overhead" expenditures (travel, postage, photocopying, etc.).

[b]Figures not adjusted for inflation.

[c]Beginning in 1980, the number of allocated "positions" was redefined as the number of allocated "full-time equivalents (FTEs)." FTEs allow the hiring of more than one person for a given FTE (e.g., two half-time employees for one FTE), which was not possible under the previous system.

[d]Additional funds transferred from other agencies.

[e]An additional 10 million dollars was appropriated to support a smoking and alcohol demonstration grant program for children and adolescents. This money was later transferred from the Office on Smoking and Health (which at that time was within the Office of the Assistant Secretary for Health) to the Centers for Disease Control.

[f]A total of 3.526 million dollars was originally appropriated, but 174,000 dollars were withheld ("sequestered") pursuant to Section 515 of Public Law 99-190.

SOURCE: Office on Smoking and Health (unpublished data).

TABLE 9.—Expenditures on smoking and health by DHHS, fiscal years 1979–81 and 1983–86

Agency	Fiscal year expenditures[a] (in thousands of dollars)						
	1979	1980	1981	1983	1984	1985	1986
ADAMHA	153		1,184	1,579	2,024	2,353	2,796
CDC[b]	213	4,400	445		50	380	755
HRSA[c]	377	457	386				
NIH[e]	18,550	16,150	12,931	13,810	21,520	26,850	33,112
NCI	12,845	13,235	10,182	9,476	16,721	21,131	27,099
NHLBI	2,550	2,900	2,637	2,210	2,700	3,375	3,360
OASH	1,853	2,074	1,555	2,024	3,273	2,503	2,862
OSH[b d]	1,706	1,961	1,555	1,895	3,148	2,495	2,857
TOTAL[e] (smoking and health)	21,146	23,081	16,501	17,413	26,867	32,086	39,525
TOTAL of all prevention activities	2,971,171	3,530,405	3,571,060	3,577,069	3,823,993	3,908,524	4,088,465
Smoking and health, as % of all prevention activities	0.7	0.7	0.5	0.5	0.7	0.8	1.0

NOTE: ADAMHA, Alcohol, Drug Abuse, and Mental Health Administration (includes National Institute on Drug Abuse); CDC, Centers for Disease Control; HRSA, Health Resources and Services Administration; NIH, National Institutes of Health; NCI, National Cancer Institute (part of NIH); NHLBI, National Heart, Lung, and Blood Institute (part of NIH); OASH, Office of the Assistant Secretary for Health; OSH, Office on Smoking and Health.

[a]Figures not adjusted for inflation.

[b]OSH was transferred administratively from OASH to CDC in September 1986.

[c]For fiscal years 1979–81, expenditures were reported separately for the Health Resources Administration and the Health Services Administration, but are combined in this table under HRSA, which now subsumes these two agencies.

[d]The difference between these expenditure figures for OSH and those in Table 8 reflect the fact that the figures in this table may exclude salaries and other "overhead" expenditures (e.g., travel, postage, photocopying).

[e]Figures differ slightly from published data because of revised NCI figures.

SOURCE: US DHHS (1981b, 1982b, 1985b, 1987b). The figures in this inventory may vary slightly from figures contained in other documents because each agency applied its own criteria, within general guidelines, for identifying these expenditures. Some prevention expenditures within certain block grants or certain programs (e.g., medicaid) are not available with current reporting systems and thus may not be included in the figures in this table. Figures for NCI budget year were provided by the Deputy Director, Division of Cancer Prevention and Control.

State Smoking and Health Plans

Data on expenditures relating to smoking and health by State and territorial health departments were not available for this Report. However, the existence of a State Smoking and Health Plan is an indicator of a well-developed State smoking control program.

State smoking control plans may be produced by a State health department acting alone or in conjunction with other public and private organizations in the State that are interested in smoking and health. They may also be produced by an advisory committee or "citizens' panel" on smoking and health appointed by the Governor or State health officer. Table 10 provides a list of selected State Reports on smoking and health. The most comprehensive reports provide State-specific information on tobacco use, smoking-attributable mortality and economic costs, current tobacco control activities, and recommendations for tobacco control programs and policies and for information collection. A similar report has also been produced by the City of New York (New York City Department of Health 1986).

The Minnesota Plan for Nonsmoking and Health (Minnesota Department of Health 1984, 1987b) is often cited as a particularly well-developed program. In 1983, the Minnesota Commissioner of Health established the Minnesota Center for Nonsmoking and Health. The three-member staff of the Center organized the Minnesota Technical Advisory Committee on Nonsmoking and Health, with representation from a variety of sectors: wholesale–retail sales; labor; medicine; nursing; hotels, resorts, and restaurants; law; large and small business; education; insurance; economics; advertising; State legislature; local government; and community action. In September 1984, the committee issued a 198-page document, *The Minnesota Plan for Nonsmoking and Health* (Minnesota Department of Health 1984), with 39 recommendations. During the same year, nearly 30 public and private organizations joined to form the Minnesota Coalition for a Smoke-Free Society by the Year 2000.

In June 1985, the Minnesota legislature ratified smoking control legislation, several provisions of which were based on recommendations of *The Minnesota Plan*. One of these provisions was a 5-cent increase in the State cigarette excise tax. One cent of the tax increase was earmarked for a public health fund, one-quarter of which was set aside for tobacco use prevention. The revenues have been used to fund special project grants for local smoking control projects, surveillance of adult and teenage use of tobacco in the State, a mass media educational campaign, and evaluation of the impact of these interventions.

Eight Western States (Arizona, Colorado, Montana, New Mexico, North Dakota, South Dakota, Utah, and Wyoming) are cooperating on the first regional tobacco-and-health "plan," the Rocky Mountain Tobacco-Free Challenge. The eight State health departments are coordinating a competition among these States to achieve specific goals by the year 2000. These goals include a 50-percent reduction in the prevalence of tobacco use by adults and youth, a 50-percent reduction in consumption of all tobacco products, and a 25-percent reduction in deaths related to tobacco use. The Governors of these eight States signed a declaration in early 1988 endorsing the competition and the year 2000 goals (Vilnius 1988).

TABLE 10.—Selected State and local reports on smoking and health

State	Year	Origin of report[a]	Information in report			
			Prevalence of smoking	Smoking-attributable mortality	Smoking-attributable costs	Recommendations
Colorado	1986	AC	X	X	X	X
Maine	1983	SHD	X	X	X	X
Massachusetts	1988	SHD	X	X	X	X
Michigan	1980	AC		X	X	X
	1984	SHD		X[b]		
Minnesota	1984	SHD	X	X	X	X
	1987	SHD	X	X	X	X
New Jersey	1988	AC	X	X	X	X
New York City	1986	AC	X	X	X	X
North Dakota	1986	SHD		X[c]		
Pennsylvania	1986	CC	X	X		X

[a]AC, Advisory Committee or Citizens' Panel; SHD, State Health Department; CC, Consensus Conference.
[b]By State Senate district.
[c]State- and county-specific data.
SOURCE: Colorado Department of Health (1986); Maine Department of Human Services (1983); Massachusetts Department of Public Health (1988); Michigan Department of Public Health (1980, 1984); Minnesota Department of Health (1984, 1987b); New Jersey Commission on Smoking or Health (1988); New York City Department of Health (1986); North Dakota State Department of Health (1986); Pennsylvania Plan for Tobacco or Health (1986).